8.1.9.d *J 2 West*

Site Description and Existing Conditions

The J 2 West vernal pools occur on two parcels located to the northwest of the Otay Mesa Road and Ocean View Hills intersection. Both parcels are in private ownership; the southern parcel is currently being proposed for development as a religious facility. The site is zoned for community shopping centers and is outside the MHPA. Nearby land uses include residential development, transportation, educational facilities, MHPA open space, a vernal pool preserve, and un-developed land.

Fifty-nine natural vernal pools and road ruts (2,753 m^2 combined basin area [0.680 acres]) were mapped at the 40-acre site. Stockpen gravelly clay loam and Olivenhain cobbly loam support non-native grasslands, ruderal vegetation and small areas of disturbed coastal sage scrub. *Branchinecta sandiegonensis* were present in 2003.

Although considered separately here due to ownership and conservation status, the J 2 West site is geographically related to vernal pools at Hidden Trails, Otay Mesa Road, and Cal Terraces, and part of the same complex and series. However, extensive restoration has occurred at Otay Mesa Road and Cal Terraces while the J 2 West basins are in a natural and often disturbed state.

Threats

Development

The J 2 West parcels are privately owned and not conserved. They are located outside of the MHPA and community plan open space, and may be impacted by development. For example, a development project is currently being proposed on the southern parcel. Development at these sites could potentially directly impact vernal pools and/or indirectly impact them through isolation from adjacent open space and vernal pool preserve areas.

Invasive Species

Invasive species, particularly grasses, occur in both upland and vernal pool habitats at J 2 West.

Trespass

Trespass is generally limited to foot-traffic, although the area was historically impacted by off-road vehicles.

Litter

The site may be impacted by wind-blown trash and litter from trespassers. Although occurrences of trash dumping appear to have diminished following the development of nearby residential neighborhoods, Christmas trees and other household waste was observed in vernal pool basins during site visits in 2004.

Fire and Fire Suppression

The J 2 West vernal pools are located between Dennery Canyon and residential and educational developments. The site would likely serve as a staging area in the event of a

canyon fire, and the developed nature of much of the surrounding area would necessitate stringent fire-fighting measures.

Current Management Activities

There are no management activities planned or currently underway at J 2 West.

Management Recommendations

Due to the presence of vernal pools, this site is recommended for conservation through public acquisition or private mitigation. Although it is outside the MHPA, the site is located adjacent to large open space areas including vernal pool preserves. However, development is not precluded; if all or portions of the site are conserved through acquisition or on-site mitigation for development, the following recommendations shall be implemented.

If an on-site vernal pool preserve is required as mitigation for future project(s), the area shall be of sufficient size and shape to protect both vernal pool basins and all associated watersheds. The site is currently adjacent to Cal Terraces and Hidden Trails, and preserve design shall occur in a manner to maximize the connectivity between vernal pools, surrounding open space, and nearby vernal pool complexes.

Restoration and/or enhancement of these vernal pools may be appropriate given the higher species diversity of nearby vernal pool sites, and should be considered if conservation occurs.

This site was identified as necessary to stabilize the populations of *E. aristulatum, P. nudiuscula, O. californica, N. fossalis, B. sandiegonensis,* and *S. woottoni,* by the adopted *Recovery Plan for Vernal Pools of Southern California* (USFWS, 1998). All future management activities should promote the recovery and success of these species.

Fencing shall be installed to preclude access while maintaining connectivity with adjacent open space areas with lower risk of trespass. Appropriate bilingual signage shall be developed with both educational and no-trespassing elements. Annual maintenance shall be required to provide fence and sign repair and trash removal, as necessary. A sufficient endowment should be established to provide for necessary maintenance and management in perpetuity.

A qualified biologist shall assess the site for non-native, invasive species, and shall recommend and implement a removal plan, if necessary. If development is permitted, non-native, invasive species shall not be utilized for landscaping purposes. If weed control is required, weeding within or immediately adjacent to vernal pools should be done by hand. In upland areas, mechanical removal may be necessary, however, herbicides should not be used in or adjacent to vernal pools.

All conserved areas shall be rezoned as Open Space in the Community Plan update.

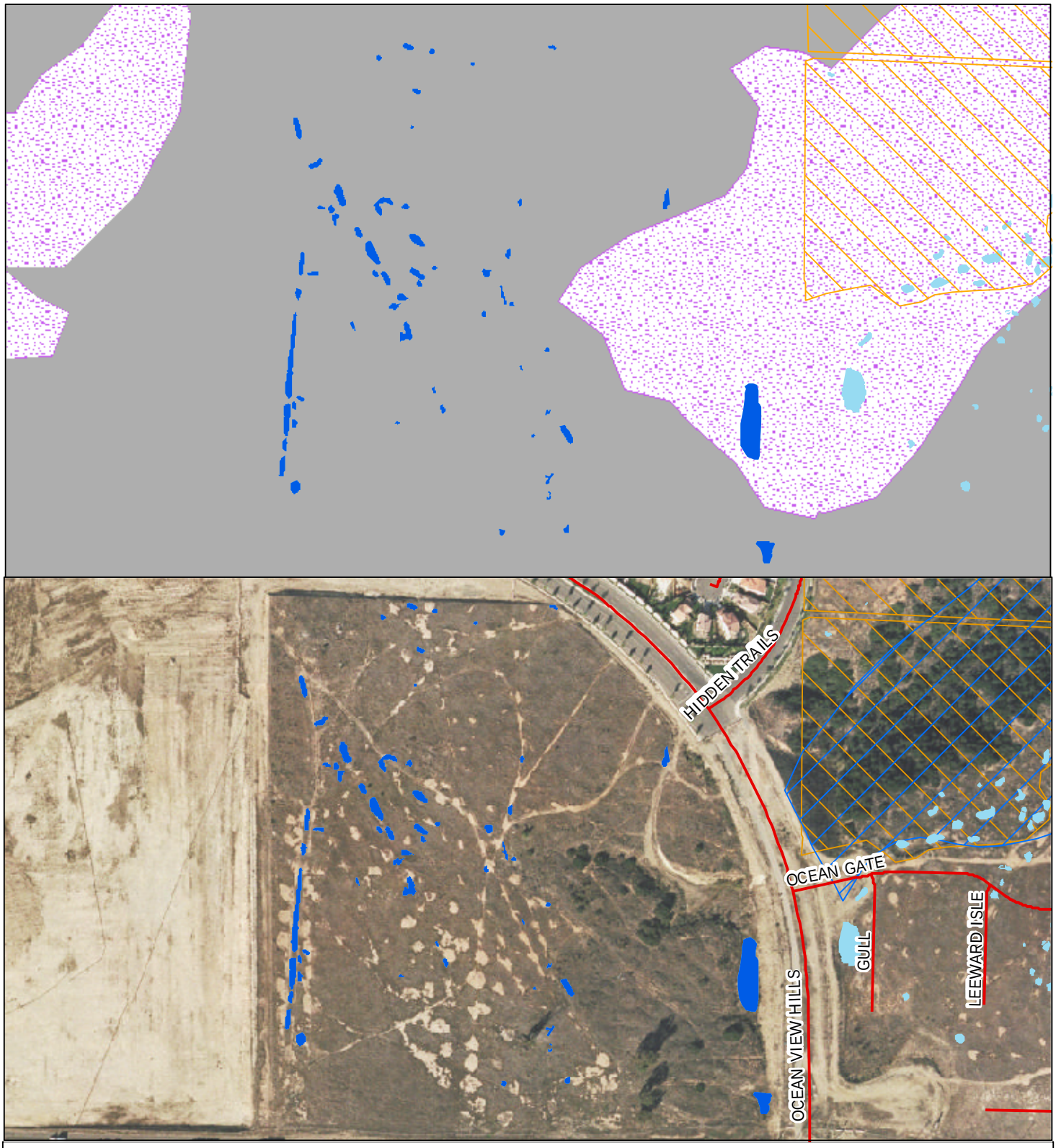
If the site is used for mitigation, a fire management plan shall be prepared and included in the adopted Habitat Management Plan.

As additional information becomes available, habitat for solitary ground-nesting bees known to specialize in vernal pool plants should be incorporated into restoration efforts.

Due to the proximity of the site to urban and residential land uses, it is recommended that educational programs be provided through local schools, Home-

Owner's Associations (HOAs), community groups, etc. Topics may include the local ecosystem, including vernal pools, habitat preservation (i.e. MSCP), and should incorporate hands-on learning via neighborhood hikes, etc. Programs should strive to present information in a manner that will increase interest in the natural world and cultivate local stewardship of open space, with the overall goal of developing positive neighborhood awareness of the preserve.

Figure 46



J 2 West

Roads
MHPA
Conserved Lands
Vernal Pools at Site
Adjacent Vernal Pools
Coastal Sage Scrub
Disturbed Land

0.05
Miles
Kilometers
0.1

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.

consider vernal pools on adjacent parcels during mitigation and preserve design to minimize impacts from isolation.

Restoration and/or enhancement of the vernal pools may be appropriate given the higher species diversity of nearby vernal pool sites, and should be considered if conservation occurs. If restoration occurs, habitat shall be provided for solitary ground-nesting bees known to pollinate vernal pool species, as appropriate.

This site was identified as necessary to reclassify the populations of *E. aristulatum* and *N. fossalis* by the adopted *Recovery Plan for Vernal Pools of Southern California* (USFWS, 1998). All future management activities should give priority to the stewardship and success of these species.

Fencing shall be installed to preclude access and appropriate bilingual signage shall be developed with both educational and no-trespassing elements. Annual maintenance shall be required to provide fence and sign repair and trash removal, as necessary. An endowment sufficient to provide for necessary maintenance and management in perpetuity shall be provided.

Prior to conservation, a qualified biologist shall assess the impact of non-native, invasive species, and shall recommend and implement a removal plan. If weed control is deemed necessary, weeding within and immediately adjacent to vernal pools should be done by hand. In upland areas, mechanical removal may be necessary, however, no herbicides shall be used in or adjacent to vernal pools. If development occurs, non-native, invasive species shall not be utilized for landscaping purposes.

All conserved areas shall be rezoned to Open Space in the next Community Plan update.

If the site is used for mitigation, a fire management plan shall be prepared and included in the adopted Habitat Management Plan.

Due to the proximity of the site to residential and educational land uses, it is recommended that educational programs be provided through local schools, Home-Owner's Associations (HOAs), community groups, etc. Topics may include the local ecosystem, including vernal pools, habitat preservation (i.e. MSCP), and should incorporate hands-on learning via neighborhood hikes, etc. Programs should strive to present information in a manner that will increase interest in the natural world and cultivate local stewardship of open space, with the overall goal of developing positive neighborhood awareness of the preserve.

8.1.9.e *J 3*

Site Description and Existing Conditions

The J 3 vernal pools occur on two parcels located along Old Otay Mesa Road near its intersection with SR 905. Both parcels are in private ownership and are not conserved. The site is outside the MHPA and is zoned for transportation, and nearby land uses include residential development, transportation, educational facilities, MHPA open space, a vernal pool preserve, and un-developed land.

Five vernal pools (354 m^2 combined basin area [3713.549 ft^2]) were mapped at the 42-acre site. Stockpen gravelly clay loam and Olivenhain cobbly loam support non-native grasses and ruderal vegetation. *Branchinecta sandiegonensis* were present in 2003.

This site has been disturbed by off-road vehicle use, illegal dumping and earth-moving related to construction activities.

Threats

Development

The J 3 parcels are privately owned and are not conserved. They are located outside of the MHPA and community plan open space, and may be impacted by development. The site is separated from the J 2 West complex by SR 905, and additional development may further isolate J 3 from adjacent preserve areas.

Invasive Species

Invasive species, particularly grasses, occur in both upland and vernal pool habitats at J 3.

Trespass

Impacts from trespass occur both from foot-traffic and off-road vehicle use.

Litter

The site may be impacted by wind-blown debris, litter from drivers on SR 905 and illegal dumping.

Fire and Fire Suppression

The J 3 vernal pools are located along major transportation routes near residential and educational developments. Impacts could result if the site were used as a staging area for fire suppression efforts.

Current Management Activities

There are no management activities planned or currently underway.

Management Recommendations

Due to the presence of vernal pools, J 3 is recommended for restoration and conservation through public acquisition or private mitigation. However, development is not precluded from this site; if development or conservation occurs, the following recommendations shall be implemented. Proposed development on either parcel should

Figure 47

J 3

0.02
Miles
Kilometers
0.05

Roads
MHPA
Conserved Lands
Vernal Pools at Site
Adjacent Vernal Pools
Disturbed Land
Agriculture

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.

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8.1.9.f *Sweetwater High School (J 33)*

Site Description and Existing Conditions

Sweetwater High School (J 33) contains eight vernal pools at a 1-acre restoration site within a 50-acre parcel owned by the Sweetwater Union High School District. The vernal pools were restored in 2000 as mitigation for impacts from the adjacent Sweetwater High School project.* This size is zoned Senior High Schools, and surrounding land uses include open space/MHPA and planned residential development. The U.S. Fish and Wildlife Service issued Biological Opinion 1-6-99-F-77 for incidental take of San Diego fairy shrimp (*Branchinecta sandiegonensis*) and spreading navarretia (*Navarretia fossalis*) resulting from the Sweetwater Union High School project.

The eight vernal pools (264.21 m^2 [2,843.98 ft^2]) occur in Olivenhain cobbly loam soils and the upland areas have been re-vegetated with Diegan coastal sage scrub. Sensitive species recorded include *E. aristulatum, M. minimus, N. fossalis, P. nudiscula, B. sandiegonensis*, and *S. woottoni*. Seven of the eight vernal pools were restored as part of the mitigation plan, which also included fencing, trash and weed removal, restoration of existing basins, upland re-vegetation, and a five year monitoring plan. Pursuant to the mitigation requirements, 2,844 ft^2 of vernal pool basins were restored.

Prior to preservation, the site had been heavily invaded by non-native species, and was threatened by off-road vehicle, immigrant and Border Patrol traffic.

Threats

Restoration Success

The *Vernal Pool Mitigation Plan for the SUHSD Otay Mesa High School Site* (Helix, 2000) specifies success criteria for the restored vernal pools, including species richness, vegetative cover, target species, and hydrologic regime. Remedial measures will be required if restoration success criteria are not met within the specified time period.

Invasive Species

Prior to restoration, non-native invasive species were introduced through disturbance associated with off-road vehicle use, etc. Both uplands and vernal pools are being re-vegetated in accordance with the accepted *Mitigation Plan*, which recognizes that weeds are a typical problem with habitat restoration and specifies monitoring schedules as well as thresholds for tolerance of non-native species (relative total cover) and mechanisms for removal, as necessary.

Edge Effects

The restoration site is adjacent to a high school and planned development. Fencing and an educational program were required as part of the mitigation plan; however, litter and other edge effects pose a threat. Sweetwater High School is also adjacent to MHPA and open space, which lowers the threat of isolation.

Trespass

The adjacent ball field at Sweetwater Union High School is separated from the vernal pools by a 8-foot chain link fence; the restoration site is surrounded by a two-strand barb-

* Additional mitigation for this project occurred at West Otay A + B.

less wire fence on the remaining sides. Signage has also been provided as specified in the *Mitigation Plan*. The fencing and signage has lowered the risk of trespass and litter; however, the potential remains for trespass by both immigrant traffic and future residents of the planned residential projects, particularly children. Off-road vehicles are currently a major threat to vernal pools in the Otay Mesa area, but this threat is expected to decrease with the construction of nearby residential communities.

Fire/Fire Suppression
Fire and fire suppression activities are unlikely to impact urban preserves.

Required Management Activities

Pursuant to Biological Opinion 1-6-99-F-77, issued through a Section 7 consultation for a U.S. Army Corps of Engineers 404 permit, the following mitigation and management activities have been required as conditions of incidental take of San Diego fairy shrimp (*Branchinecta sandiegonensis*) and spreading navarretia (*Navarretia fossalis*) resulting from the Sweetwater Union High School project.

The *Vernal Pool Mitigation Plan for the SUHSD Otay Mesa High School Site* (Helix, 2000) was accepted by the permitting agencies as mitigation for vernal pool impacts. The plan requires preservation and restoration of 162 ft^2 of vernal pool basin area and creation of 2,682 ft^2 at the on-site preserve.

Implementation of the *Plan* will require a 5-year mitigation and monitoring program, including trash removal, weed control, hydrological/topographical modification, and any necessary remedial measures, under the supervision of a re-vegetation specialist. Success criteria for the restoration are detailed in the *Plan* and final completion of the project shall be subject to review by the Army Corps of Engineers.

As part of the project, the site has been fenced with permanent, 8-foot high chain link on the eastern side (to limit access from the high school ball field) and with two-strand barb-less wire fence on all other sides. Signage has also been posted in accordance with the *Plan.*

In addition, development of an education plan to prevent trespassing and vandalism is required due to the educational nature of the project.

Management Recommendations

Active habitat restoration shall continue, as necessary, until the success criteria are met. These criteria, detailed in the approved *Vernal Pool Mitigation Plan* (Helix, 2000), shall be used by the restoration specialist and permitting agencies to determine the completeness of mitigation. Upon written notice that the mitigation has been completed to the satisfaction of the permitting agencies, the site may be transferred in fee-title to an appropriate non-profit land management company.

To minimize trespass and edge effects, fence repair will be required as necessary in perpetuity. Semi-annual maintenance patrols should occur to determine the need for fence repair and/or signage replacement, as well as litter and invasive species assessment.

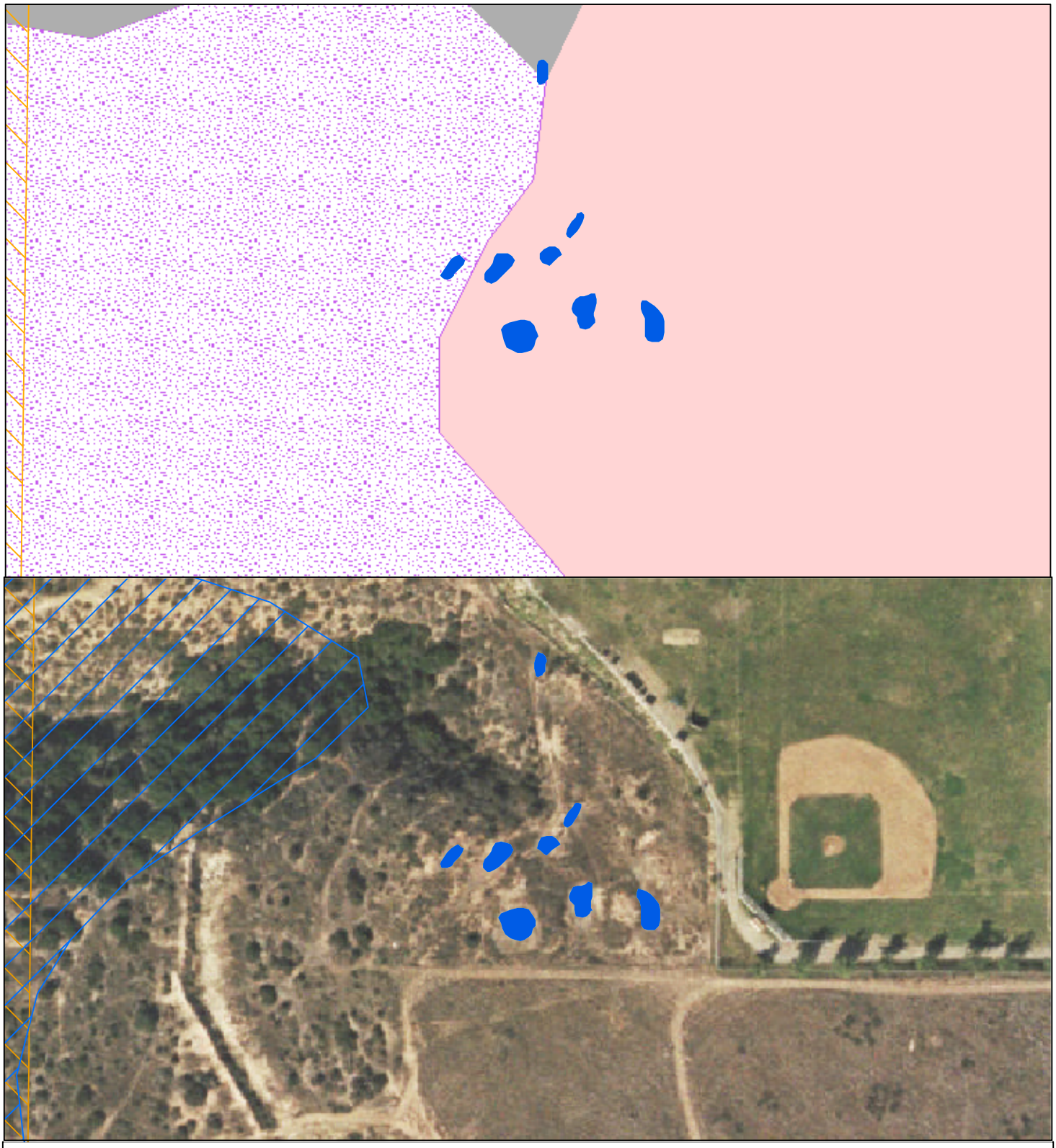
Weeding within and immediately adjacent to vernal pools should be done by hand. In upland areas, mechanical removal may be necessary; however, herbicides should not be used in or adjacent to vernal pools.

The land manager shall provide for active management after the completion of the mitigation period, including species surveys, litter patrols, weeding, etc. Due to the sensitivity of the habitats, all work shall be supervised by a qualified biologist.

The preserve area should be rezoned to Open Space. Given the proximity of the site to educational facilities, it is recommended the educational program developed as part of the mitigation plan be implemented at Sweetwater Union High School. In addition, use of the site by science teachers should be encouraged; however, any entrance to the site shall occur after the mitigation program has been completed and shall be coordinated through the land manager.

Land managers should encourage research at this site, especially relating to the long-term success of restored vernal pools and upland vegetation.

Figure 48



Sweetwater High School (J 33)

0.02 Miles

0.05 Kilometers

- Roads
- MHPA
- Conserved Lands
- Vernal Pools at Site
- Adjacent Vernal Pools
- Coastal Sage Scrub
- Disturbed Land
- Agriculture

Note: MHPA and Roads not shown in top map; vegetation mapping per Ogden 1997.